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New York State School of Clay Working
and Ceramics

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Calendar

September, 1924 — August, 1925

First Semester 1924-1925

Entrance Examinations	Monday	Sept. 15
Registration	Mon. and Tues.	Sept. 15-16
Instruction begins	Wednesday	Sept. 17
Armistice Day	Tuesday	Nov. 11
Mid-semester grades	Friday	Nov. 14
Thanksgiving Recess begins	Wednesday evening	Nov. 26

THANKSGIVING RECESS

Instruction resumed	Monday morning	Dec. 1
Founders' Day	Friday	Dec. 5
Holiday Recess begins	Thursday evening	Dec. 18

HOLIDAY RECESS

Instruction resumed	Tuesday morning	Jan. 6
Mid-year Examinations begin	Monday	Jan. 26
Examinations end, semester ends	Friday evening	Jan. 30

Second Semester

Instruction begins	Tuesday	Feb. 3
Mid-semester grades	Friday	Mar. 27
Easter Recess begins	Tuesday evening	Apr. 7

EASTER RECESS

Instruction resumed	Wednesday morning	Apr. 15
Memorial Day	Saturday	May 30
Senior Examinations begin	Monday	June 1
Senior Examinations end	Wednesday	June 3
Final Examinations begin	Thursday	June 4
Final Examinations end	Friday	June 12

EIGHTY-EIGHTH COMMENCEMENT

Annual Session before Christian Associations	Saturday morning	June 6
Annual Concert	Saturday evening	June 6
Baccalaureate Sermon	Sunday evening	June 7
Alumni Association, Directors' meeting	Monday afternoon	June 8
Commencement Play	Monday evening	June 8
Class breakfasts and reunions	Tuesday morning	June 9
Annual meeting of Trustees	Tuesday morning	June 9
Annual meeting of Corporation	Tuesday afternoon	June 9
Class-day Exercises	Tuesday afternoon	June 9
Alumni Banquet	Tuesday evening	June 9
Commencement Exercises	Wednesday morning	June 10
Alumni Association, Public Session	Wednesday afternoon	June 10
President's Reception	Wednesday evening	June 10

SUMMER VACATION

Summer Session 1925

Term begins	Wednesday	July 1
Term ends	Wednesday	Aug. 12

OFFICERS OF INSTRUCTION

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NEW YORK STATE SCHOOL OF CLAY- WORKING AND CERAMICS

This school was founded by the State of New York in 1900.

The building was especially designed for the purpose, and is located on land which was deeded by Alfred University to the people of the State. It is built of red brick and terra cotta with gray trimmings and roofed with brown tile. The main building has a floor space of about thirteen thousand square feet, and a frontage of seventy-five feet.

To this has been added a fireproof wing measuring about 36 by 57 feet and three stories in height.

In the main basement are located the kilns, the heavy machinery for the manufacture of brick, tile, hollow blocks and roofing tile, the slip-making plant, cylinders for glaze preparation, and a workshop fitted with modern appliances for pottery and porcelain manufacture. There are also rooms for mold making and drying.

In the sub-basement are located the heating plant and fuel storage.

On the principal floor are the executive offices, the technical laboratories and a lecture room. On the second floor is the department of Design and Applied Art and on the third floor a lecture room and a studio for advanced work.

The motive power is supplied by two Otto gas engines, of 36 and 8 horse power, respectively.

The school maintains a complete technical library for reference and for the encouragement of independent reading and research. It also encourages membership and activity in the New York State Students' Branch of the American Ceramic Society, which was chartered at Alfred in 1915, and in the Ceramic Guild organized by the students in Art.

Courses Offered

The courses of study which lead to a degree extend over a period of four years and embrace the science, technology, and art special to ceramics.

The course in Ceramic Engineering is designed to qualify men to occupy positions as superintendents, scientific experts, and ceramic chemists.

The course in Applied Art is intended to fit the student for the designing and producing of artistic pottery.

Benefits of the School

The demand for trained clay-workers has grown to considerable proportions, nor is there any likelihood that this demand will decrease.

Hitherto, no student who has passed through the school successfully has remained unemployed, and the director is continually in receipt of applications for persons qualified to fill responsible positions. Every effort is made by the faculty to place the students in communication with manufacturers desiring to offer them employment.

The student successfully pursuing the technical course will be able, presuming that his personal capacity is good, to take up the practical work of manufacturing ceramic wares. He will have had experience with every description of clay, and with the minerals and oxides used in preparing bodies and glazes, glasses and enamels. He will have acquired a knowledge of machinery and practical operations which he will find of the greatest value; in short, he will be a trained man as regards the problems of the ceramic industries.

Students who conscientiously pursue the course in Applied Art will be able to design and make artistic pottery, preparing their own clays and compounding their own glazes, if necessary.

Physical Training

The aim of the work in physical training is to bring the whole body to its normal condition, to acquire ease and precision in movement, and to develop the health and strength of the student.

GYMNASIUM. The gymnasium floor is in Alumni Hall. It is equipped with chest weights, dumb bells, wands, Indian clubs, horizontal and parallel bars, and mats. Dressing rooms, with individual lockers are provided.

ATHLETIC FIELD. The athletic field embraces over three acres of level land. All local intercollegiate contests in football, baseball, and track athletics are held on this field. The field affords a running track (one-sixth of a mile). Appropriate apparatus for field sports is provided.

EXPENSES

Matriculation.....	\$5 00
Graduation.....	10 00

COLLEGE FEES per semester	
Tuition, per semester*.....	65 00
Reading Room.....	2 00
Athletics.....	5 00
College Paper (Fiat Lux).....	1 25

EXTRA FEES per semester, for the use of instruments, apparatus and laboratory materials:	
Chemistry 1, 5.....	6 00
Chemistry 2, 3.....	8 00
Gymnasium (Freshmen, Sophomores).....	2 00
Machine Shop.....	5 00
Physics 1b.....	5 00
Physics 4.....	5 00
Surveying.....	5 00
Woodshop.....	5 00

MISCELLANEOUS FEES AND DEPOSITS:	
Chemistry Breakage Deposit, Chemistry 1, 5.....	5 00
Chemistry Breakage Deposit, Chemistry 2, 3.....	10 00
Room Deposit (all students in College dormitories).....	10 00
Special Examinations, each.....	1 00
Late Registration (all students not registering on Registration days).....	2 00

Students who register for more than eighteen hours will be charged six dollars for each additional hour.

Students taking fewer than ten hours will be charged six dollars for each hour.

Semester bills for college fees will be issued on or before the fifteenth of October and February, and must be paid at the

* Tuition free to residents of New York State.

office of the Treasurer before the first of the following month. Failure to comply with this regulation renders the student liable to suspension.

No tuition is charged to residents of New York State who are prepared to enter the regular courses, but no student is entitled to free tuition in any college class not forming part of a course in the School of Ceramics, nor are students registered in the college entitled to free tuition in the School of Ceramics in respect of any subject for which college credit is given.

Rooms and Board

Rooms and board including fuel can be obtained in private families from \$7.00 to \$8.00 per week. Board in clubs organized and managed by the students themselves varies from \$4.75 to \$6.00 per week according to the means and inclinations of the students.

Estimated Annual Expenses

Excluding cost of clothing and travel, one can go through a college year by close economy upon \$400.00; and by exercising care, upon \$450.00. An allowance of \$550.00 is comfortable and \$650.00 is liberal.

Board, \$4.75 to \$8.00 per week.....	\$162 00 to \$288 00
Rooms.....	54 00 to 110 00
Laundry.....	18 00 to 22 00
Books.....	25 00 to 35 00
Class dues, etc.....	6 00 to 20 00
College tuition, incidentals and extras.....	135 00 to 200 00
(Tuition free to residents of New York State).....	
Total for year.....	\$400 00 to \$675 00

Self-Support

Many of the graduates have been persons of very limited means who worked their way through college. While the school cannot guarantee work to all applicants, enterprising students can usually find employment in the town with satisfactory compensation for all the time they can profitably spare from their studies. Some earn enough to meet the greater

part of their expenses. Students should distinctly understand that when they attempt entire self-support they should lengthen their term of study.

College Year

The college year consists of two semesters of about eighteen weeks each. There is a vacation at the holidays of about two weeks, a week's recess at Easter, and a summer vacation of about thirteen weeks.

Class Exercises

The class period is one hour in length; in laboratory work, however, the class period is two hours. There are no classes on Saturday or Sunday. Each student is expected to have at least sixteen hours per week, and may not register for more than seventeen with the following exceptions: (1) If a student has no standing less than B in the preceding term he may register for eighteen hours. (2) Students who have a grade of A in more than half their work may register for more than eighteen hours upon the approval of the faculty.

The one hour credit for physical training is not included in these figures.

Scholarship Indices

For determining scholarship and for awarding honors the office uses a system of point values corresponding to the above grades as follows: each hour at A is equivalent to 3 points; at B, to 2; at C, to 1; at D, to 0; at E, to -1; at F, to -2; at I, to -1. At intervals the Registrar determines a scholarship index for every student and for student groups. These indices are obtained by dividing the total number of points by the total number of hours.

Unit of Credit

One class period per week for one semester is taken as the unit of credit and is called a semester hour.

The work of students in each subject is graded as A, excellent; B, good; C, fair; D, poor; E, conditioned failure; F, failure; I, incomplete.

Regulations on Absences

The maximum number of absences allowed per hour credit per semester is three (3). That is, in a two hour course, six (6) absences are allowed; in a three hour course, nine (9); in a five hour course, fifteen (15). Overcutting will reduce the student's grade to F.

Examinations

Final examinations are held at the close of each semester in addition to occasional written tests during the semester. Fees will be charged for all examinations taken by those not regular members of classes, or at other times than those appointed for the class examinations.

ADMISSION

Candidates for admission to the freshman class must be at least sixteen years of age and must present certificates of good moral character. The particular requirements for entrance are explained below. Preparatory work is estimated in "units." The "unit" represents a course of five recitations weekly throughout an academic year of the preparatory school. Fifteen "units" or an equivalent must be offered.

Entrance Requirements

ENGLISH. 3 units. The candidate must be familiar with elementary rhetoric, both as a science and an art, and must be proficient in spelling, punctuation, idiom, and division into paragraphs. Preparation must include the work in English prescribed by the various college associations.

Each student must be able to pass an examination upon ten books selected from the list prescribed by the college entrance associations. The following ten are recommended: Shakespeare, *Julius Cæsar*, and *The Merchant of Venice*; *The Sir Roger de Coverly Papers*; Goldsmith, *The Deserted Village*; Scott, *Ivanhoe*; Hawthorne, *The House of the Seven Gables*; Irving, *Sketch Book*; Ruskin, *Sesame and Lilies*; Lowell, *The Vision of Sir Launfal*; Longfellow, *Courtship of Miles Standish*.

In addition to the above a thorough study of each of the works named below is required. The examination will be upon subject matter, form, and structure.

Shakespeare, *Macbeth*; Milton, *L'Allegro*, *Il Penseroso*, and *Comus*, or Tennyson, *Idylls of the King*; Burke, *Speech on Conciliation with America*, Washington, *Farewell Address* and Webster, *Bunker Hill Oration*; Macaulay, *Life of Johnson*, or Carlyle, *Essay on Burns*.

FOREIGN LANGUAGES. 4 units. Latin grammar and composition; Cæsar, four books of the *Gallic War*; Cicero, six orations; Vergil, six books of the *Aeneid*, or equivalents; or four units from not more than three of the following: Latin, Greek, German, French, Spanish.

MATHEMATICS. 2 units. Elementary Algebra, including fundamental operations, factoring, fractions, ratio, proportion, radicals, quadratics; Plane Geometry, including the straight line, angle, circle, proportion, similarity, and areas.

SCIENCE. 1 unit. Biology, Botany, Physiology, Zoology, Physical Geography, Physics, or Chemistry. Any one may be offered.

ELECTIVE: 5 units in addition to the above subjects. Candidates may substitute one unit of science and one unit of advanced mathematics for two units of foreign language. Candidates for the degree in Ceramic Engineering should offer Solid Geometry and Intermediate Algebra.

Summary

English.....	3 units
Mathematics.....	2 units
Foreign Languages.....	4 units
Science.....	1 unit
Elective.....	5 units

Admission is gained either on certificate or on examination, as follows:

Admission on Certificate

REGENTS' CREDENTIALS. The credentials of the University of the State of New York are accepted instead of an examination in the subjects required for admission, so far as they cover these requirements. (For description of subjects, see *Entrance Requirements*.)

PRINCIPAL'S CERTIFICATE. Certificates are also received from principals of preparatory or high schools outside of New York State, provided such schools are known to the faculty for thoroughness of instruction. Such certificate must

specify, in connection with each subject, the extent to which it has been pursued, by giving the text-book used, the method of instruction, the amount of time given to it, the date of the final examination, the degree of the applicant's proficiency, and must clearly show that the student has met the requirements in every detail. The school furnishes blank forms for such certificates upon application of principals of approved schools. Principals of preparatory schools who desire to have their students admitted on certificate are invited to correspond with the director.

Admission on Examination

Candidates who fail to present satisfactory certificates must pass a written examination in the required subjects.

For the convenience of students not having such certificates, entrance examinations are held at Alfred on the day preceding Registration Day.

Conditioned Students

No student can enter the freshman class conditioned in any subject.

Admission to Advanced Standing

Students from other schools, having a course equivalent to that of the New York State School, may enter at the point from which they take dismissal, upon presentation of satisfactory certificates of standing and character, including an honorable dismissal.

Industrial Experience

Each candidate for a degree in Ceramic Engineering is required to spend two summer periods of ten weeks each, or the equivalent, in an approved industrial plant and to turn in a satisfactory report together with a certifying letter from the person in charge of the work. For each summer period one hour credit will be given.

With the approval of the director which should be obtained not later than the close of the Sophomore year, a candidate for a degree may offer a thesis in some branch of ceramic research. The title of the thesis must be chosen before November 1st of the Senior year and a typewritten copy of the completed work must be deposited with the director not later than May 1st next following.

Graduation

Upon students who satisfactorily complete the course in Ceramic Engineering, Alfred University will confer the degree of Bachelor of Science (in Ceramic Engineering), and upon students who satisfactorily complete the course in Applied Art the degree of Bachelor of Science (in Applied Art).

COURSES OF STUDY

Course in Ceramic Engineering

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Mathematics 1.....	5	Mathematics 1.....	5
Chemistry 1.....	4	Chemistry 1.....	4
English 1.....	3	English 1.....	3
Ceramics 1.....	1	Ceramics 1.....	1
Drafting.....	3	Drafting.....	3
Physical Training.....	1	Physical Training.....	1
Ethics.....	1	Ethics.....	1
<hr/>		<hr/>	
18		18	

Second Year

<i>First Semester</i>		<i>Second Semester</i>	
Mathematics 6a (Calculus).....	3	Mathematics 6b (Calculus).....	3
Physics 1a, 1b.....	5	Physics 1.....	5
Chemistry 2.....	3	Chemistry 3.....	3
German or French.....	3	German or French.....	3
Ceramics 2.....	3	Ceramics 2.....	3
Physical Training.....	1	Physical Training.....	1
<hr/>		<hr/>	
18		18	

Third Year

<i>First Semester</i>		<i>Second Semester</i>	
Mathematics 8 (Mechanics).....	3	Mathematics 8 (Mechanics).....	3
Chemistry 4.....	3	Chemistry 5.....	3
Chemistry 6.....	3	Chemistry 6.....	3
Ceramic Engineering 1.....	3	Ceramic Engineering 1.....	3
Ceramic Geology.....	3	Mineralogy.....	3
German or French.....	3	German or French.....	3
<hr/>		<hr/>	
18		18	

Fourth Year

<i>First Semester</i>		<i>Second Semester</i>	
Ceramic Engineering 2.....	4	Ceramic Engineering 3.....	4
Physics 2.....	3	Physics 3.....	3
Power and Machinery.....	2	Power and Machinery.....	2
Elective.....	9	Elective.....	9
<hr/>		<hr/>	
18		18	

The elective is to be chosen, with the consent of the Director, from the following subjects: German or French, four hours; Introduction to Economics, six hours; Labor Problems, three hours; Principles of Public Finance, three hours; Summer Practice, two hours; Surveying, four hours; Thesis, four hours.

Course in Applied Art

First Year

<i>First Semester</i>		<i>Second Semester</i>	
Drawing 1, Studio Practice.....	2	Drawing 1, Studio Practice.....	2
Pottery Making 1.....	1	Pottery Making 1.....	1
Design 1, Lecture and Studio.....	2	Design 1, Lecture and Studio.....	2
Ceramics 1, Lecture.....	1	Ceramics 1, Lecture.....	1
English 1, Eng. Composition and Rhetoric.....	3	English 1, Eng. Composition and Rhetoric.....	3
Modern Language.....	3	Modern Language.....	3
Chemistry 1.....	3	Chemistry 1.....	3
Physical Training.....	1	Physical Training.....	1
Ethics 1.....	1	Ethics 1.....	1
<hr/> 17		<hr/> 17	

Second Year

<i>First Semester</i>		<i>Second Semester</i>	
Drawing 2, Studio Practice.....	2	Drawing 2, Studio Practice.....	2
Pottery Making 2, Studio Practice.....	2	Pottery Making 2, Studio Practice.....	2
Design 2, Lecture and Studio.....	2	Design 2, Lecture and Studio.....	2
Ceramics 2, Lecture and Laboratory.....	3	Ceramics 2, Lecture and Laboratory.....	3
English 8.....	2	English 8.....	2
Modern Language.....	3	Modern Language.....	3
Physical Training.....	1	Physical Training.....	1
History of Art.....	2	History of Art.....	2
<hr/> 17		<hr/> 17	

Third Year

<i>First Semester</i>		<i>Second Semester</i>	
Drawing 3, Studio Practice.....	2	Drawing 3, Studio Practice.....	2
Pottery Making 3, Studio Practice.....	3	Pottery Making 3, Studio Practice.....	3
Design 3, Lecture and Studio.....	2	Design 3, Lecture and Studio.....	2
Ceramic Craft 2, Lecture and Studio.....	2	Ceramic Craft 2, Lecture and Studio.....	2
Elective.....	3	Elective.....	3
Elective.....	2	Elective.....	2
Ceramics 7, Laboratory.....	2	Ceramics 7, Laboratory.....	2
<hr/> 16		<hr/> 16	

Fourth Year

<i>First Semester</i>		<i>Second Semester</i>	
Drawing 4, Studio Practice.....	2	Drawing 4, Studio Practice.....	2
Pottery Making 4, Studio Practice.....	3	Pottery Making 4, Studio Practice.....	3
Design 4, Lecture and Studio.....	2	Design 4, Lecture and Studio.....	2
Ceramic Guild Management, Lecture and Studio.....	2	Ceramic Guild Management, Lecture and Studio.....	2
Elective.....	5	Elective.....	5
Ceramics 8, Thesis.....	2	Ceramics 8, Thesis.....	2
<hr/> 16		<hr/> 16	

The elective is to be chosen, with the consent of the Director, from the following subjects: Psychology, four hours; Educational Psychology, three hours; Principles of Education, three hours; History of Education, four hours; Methods of Education, three hours; French 6, six hours; German 3, four hours; Spanish 3, four hours; Introduction to Economics, six hours; English 12B, four hours.

DEPARTMENTS OF INSTRUCTION

Description of Courses

CERAMIC TECHNOLOGY

Professor Binns

1. Lectures on the origin, properties, and uses of clays and other ceramic materials. Types of ware and methods of manufacture. Elementary glaze and body composition. History of Ceramics.

Laboratory practice in the operations involved in manufacture. The preparation and use of forms, molds, and dies. Making saggers, jiggering, pressing, and casting pottery. Making brick and tile. The general use of the machine equipment.

First year. One hour lecture and two hours laboratory. *One hour.*

2. Lectures on the occurrence, classification, and identification of clays. The manufacture of all classes of ceramic products. The theory and practice of drying and burning. The compounding of clay mixtures, and the production and use of glazes and colors. The glaze formula.

Laboratory practice in clay testing. The measurement of the physical properties of clays and the compounding of bodies and glazes. Kiln firing.

Second year. Two hours lecture and four hours laboratory. *Three hours.*

3. Laboratory practice for art students. The production of form by molding. The preparation of glazes for decorative pottery.

Third year. Four hours laboratory. *Two hours.*

4. Thesis in applied art.

Fourth year. Four hours laboratory. *Two hours.*

CERAMIC ENGINEERING

Professor Andrews

1. Lectures on the winning and preparation of clays. The technology of the ceramic industries. The mineralogical, chemical, and physical changes which take place in clays, bodies, and glazes during their preparation, drying, and burning. The theory and practice of pyrometry.

Laboratory practice in the testing of clays and the production, decoration, and firing of finished wares.

Third year. Two hours lecture and four hours laboratory. *Three hours.*

2. Lectures on the raw materials, preparation, compounding, and manufacture of refractories, lime, plaster, and cements. The theory of hydraulicity and the reactions involved in manufacture. Methods of testing.

Laboratory practice in the production and testing of refractories, lime, plaster, and cement and the study of their physical properties. The use of the electric furnace in the study of dehydration, lag curves, melting points, eutectics, and the viscosity of fused minerals and mineral mixtures.

Fourth year. Two hours lecture and four hours laboratory. *Four hours. I.*

3. Lectures on the raw materials, preparation, compounding and manufacture of the various types of glass and enamel. Laboratory practice in the production and testing of various types of glass and enamel, special emphasis being laid on the refractories used in these industries.

Fourth year. Two hours lecture and four hours laboratory. *Four hours. II.*

4. A course in general geology especially arranged for the ceramic engineer. It deals with the development and the features of the earth's surface with special reference to the geology of ceramic materials.

Fourth year, 3 hours lecture and recitation. *Three hours. I.*

5. Mineralogy. This course includes an introduction to crystallography, microscopic mineralogy and the identification of minerals and rocks by inspection and simple tests.

Fourth year. 3 hours lecture and laboratory. *Three hours. II.*

POWER AND MACHINERY

The aim of this course is to familiarize the student with the installation, maintenance and repair of shop power and machinery. With this end in view, a study will be made of internal combustion engines, ceramic machinery and methods of power transmission. Under repair will come bearing removal, shaft straightening, belt lacing, valve grinding and such other operations as are necessary to the proper maintenance of a shop. Laboratory exercises will be carried on in which each student will be required to perform the different operations. During the last half of the second semester a study of the Strength of Materials will be taken up. This will include elastic and ultimate strength, general properties, moments for beams and columns, torsion of shafts, elastic deformities, reinforced concrete, combined stresses, and resilience. *Two hours.*

CHEMISTRY

Professor Radasch

1. INORGANIC CHEMISTRY. The fundamental principles of chemistry are taught by a systematic study of the non-metallic elements during the first semester, followed by a broadening of the student's knowledge by study of the metallic elements during the second half of the year. The laboratory work, in which the student is expected to demonstrate facts and principles for himself, follows closely upon class room discussion. Lectures and recitations, two periods; laboratory, one period. Textbook, Norris, *Inorganic Chemistry*. *Four hours.*

2. QUALITATIVE ANALYSIS. This course serves to emphasize the principles involved in chemical analysis, to give the student practice in laboratory manipulation, and to broaden his knowledge of inorganic chemistry. Preliminary experiments illustrate principles and give practice in writing chemical equations and are followed by the analysis of simple unknown solutions and salts and finally by the complete analysis of several industrial products such as alloys, pigments, minerals, ores, glass, enamels, etc. Lectures and recitations, one period; laboratory, two periods. Textbook, Noyes, *Qualitative Chemical Analysis*. Prerequisite, Chemistry 1. *Three hours. I.*

3. QUANTITATIVE ANALYSIS. This course is devoted to volumetric analysis and elementary gravimetric analysis. In the laboratory, accuracy, care, and integrity are emphasized as being necessary for successful analysis. The principles of stoichiometry are also taught. Lectures and recitations, one period; laboratory, two periods. Textbook, Talbot, *Quantitative Chemical Analysis*. Prerequisite, Chemistry 2. *Three hours. II.*

4. QUANTITATIVE ANALYSIS. This is an advanced course, covering the analysis of rocks, clays, cements, etc. Lectures and recitations, one period; laboratory, two periods. Textbook, Washington, *The Chemical Analysis of Rocks and Minerals*. Prerequisite, Chemistry 3. *Three hours. I.*

5. FUELS AND COMBUSTION. The analysis of solid, liquid, and gaseous fuels and their products of combustion is discussed in the class-room and carried out in the laboratory. Industrial stoichiometry, covering combustion calculations on furnaces and kilns, heat losses, etc., is included in this course. Prerequisite, Chemistry 3. *Three hours. II.*

6. PHYSICAL CHEMISTRY. The general principles of chemistry such as the pressure-volume relations of gases, the properties of solutions, the equilibria and rate of chemical

changes, heterogeneous equilibrium in terms of the phase rule, thermo-chemistry and colloidal chemistry are considered in this course. The student is required to solve a large number of problems pertaining to these subjects. Lectures and recitations, three periods. Textbook, Noyes and Sherrill, *Chemical Principles*. Prerequisite, Chemistry 2, Mathematics 6, and Physics 1a and 1b. *Three hours.*

APPLIED ART

Miss Fosdick

Miss Nelson

Public and private schools are requiring well trained teachers of crafts. Although pottery is the craft in which the school offers exceptional facilities for production, a crafts course for the better understanding of color and design in Applied Art has been added in the junior and senior years. This includes block printing and batik.

The electives allowed in the junior and senior years may be utilized in the department of education as required work for the teacher's professional certificate and in further study in college subjects, or they may be used in additional craft work.

Drawing

1. Freehand perspective, value study.

First year. Four hours studio. *Two hours.*

2. Composition, cast drawing, lettering.

Second year. Six hours studio. *Two hours.*

3. Kanakadea drawings, sketch.

Third year. Four hours studio. *Two hours.*

4. Sketch.

Fourth year. Four hours studio. *Two hours.*

Pottery Making

1. The first semester is given over to a course in appreciation leading to discrimination in design for pottery. Building of pottery commences with the second semester which includes glazing with hand ground glazes.

First year. Three hours studio. *One hour.*

2. Continuation of building of pottery with elementary work on the wheel. Use of varied types of glazes in connection with laboratory work in glaze preparation and mold-making.

Second year. Four hours studio. *Two hours.*

3. Processes of pottery decoration, slip treatment, underglaze and overglaze, modeling and incising. Kiln management and firing.

Third year. Six hours studio. *Three hours.*

4. Advanced work in decorating and glazing. Advanced wheel work.

Fourth year. Six hours studio. *Three hours.*

Design

1. Design theory.

First year. Four hours studio. *Two hours.*

2. Color theory.

Second year. Six hours studio. *Two hours.*

3. Design and color applied to block printing and batik.

Third year. Four hours studio. *Two hours.*

4. Thesis in applied design.

Fourth year. Four hours studio. *Two hours.*

Ceramic Craft

Special decorative processes for pottery, the making and renewal of equipment, and care of machinery.

Third year. Four hours studio. *Two hours.*

Guild Management

Production of pottery with special reference to commercial problems and economy of production. The problem of the sales room and private studio. Kiln management. Ceramic craft a prerequisite.

Fourth year. Four hours studio. *Two hours.*

Honor Courses

Third and fourth year students complying with the requirements for Honor Courses stated in the catalog of Alfred College may do additional work in an Honor Course in pottery making.

History of Art

Lectures and recitations illustrated with photographs, slides and casts on the history of Art and the appreciation of beauty. The beginnings of art as seen in the work of primitive peoples and of children. Egyptian architecture and decorative arts. The architecture and sculpture of Greece. Roman achievements in civic art. The great cathedrals and the decorative arts of the Middle Ages. The painting and sculpture of the Renaissance. Modern Art.

The work is done through lectures, supplementary reading and keeping of note books.

Third year. Two hours recitation. *Two hours.*

DEPARTMENT OF INVESTIGATION AND RESEARCH

Clay Testing

Professor Binns

The State School of Ceramics is fitted, and the experts in charge are qualified, for the professional examination and testing of clays for economic purposes. Such clays may be classified under the following heads:

- (a) Kaolin, white burning residual clay.
- (b) Kaolin, white burning, washed for market, used in the manufacture of pottery, porcelain, and paper.
- (c) Ball clay, white or cream burning, sedimentary clay of high plasticity, used in pottery manufacture.
- (d) Stone ware clay, gray or cream burning, more or less sandy in character, used in stone ware manufacture.
- (e) Fire clay, buff or white burning, refractory, used for manufacture of fire brick.
- (f) Brick clay including colored clays and shales, used for the manufacture of brick and tile of various qualities and descriptions.

For each of the above classes special tests are necessary, and the charges made are proportionate to the work required.

A report upon each sample will be furnished and must be understood to refer only to the samples submitted unless the experts are instructed to examine the deposit and prepare their own samples, in which case special charges will be made. The report includes physical tests and chemical analysis where necessary.

Advice as to washing or other preparation of the clay is also given, together with an opinion as to the industry to which the material may be applied.

Industrial Problems

Professor Binns

Professor Andrews

The problems incidental to the manufacture of clay wares are regularly investigated at the school. Manufacturers are invited to present questions for study. Persons resident within the state are entitled to reasonable services without charge.